

POSITION DUTY STATEMENT

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PM-0924 (REV 03/2006)

CLASSIFICATION TITLE
Electrical Engineering Technician II

WORKING TITLE
Electrical Engineering Technician II

OFFICE/BRANCH/SECTION
07/Freeway Operations/Traffic Monitoring

POSITION NUMBER
907-351-3627-XXX

EFFECTIVE DATE

As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work as scheduled; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team as well as those we serve.

GENERAL STATEMENT

Under the general direction of a Transportation Engineer Civil, the incumbent receives direction and oversight to install and remove various types of traffic data collection equipment. In cooperation with the TE Civil and/or Electrical Engineering Technician III the Electrical Engineering Technician II will help assess field problems and assist in carrying out solutions. Follows work assignments for field layout of equipment and retrieves data. Work is reviewed by TE Civil. Assists in repair and maintenance of traffic monitoring station equipment. Required to learn design specifications and procedures in construction contracts. Valid class "C" driver's license is required. Duties include, but are not limited to:

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M)	Job Description
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- | | |
|---------|---|
| 50% (E) | DATA COLLECTION - Installs electronic data collection equipment after receiving study assignment layout. Programs field equipment and retrieves collected data with laptop computer. Spends significant amounts of time driving large van to and from work sites. Works with both hand and power tools. Prepares sensors for installation. Installs sensors in roadway and shoulder areas. Communicates changed field conditions that may affect collected data to TE Civil. |
| 35% (E) | EQUIPMENT MAINTENANCE - Assists in adjusting and calibrating various types of microprocessor based traffic data collection equipment. Learns operation of, and how to assess and repair problems with traffic data collection equipment. Troubleshoots problems with field equipment using different kinds of electronic test equipment. Removes and replaces non-functional field equipment. Cooperatively assesses complex field problems and recommends solutions. Reports damaged field elements to Division of Maintenance. Contacts telephone and power utilities when necessary to resolve problems. |
| 10% (E) | DATA PROCESSING - Uploads collected data from laptop to database in field office server. Uses database software to format data into required report. Prints out report. Checks data for errors and reports any problems to TE Civil. |
| 5% (E) | CONTRACT OVERSIGHT - Assists in and required to learn design and construction oversight procedures for contracts to repair and upgrade traffic monitoring stations. Performs final electrical checks on repaired stations. Calibrates new stations. Communicates any problems to TE Civil and Division of Construction. |

ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned
MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS
This position does not supervise other employees.

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KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Basic knowledge of traffic engineering principles, mathematical formulas and calculations; use of various types of traffic data collection equipment; use of personal computers and their programs (i.e. Windows OS, spreadsheet, database and data communications programs). Working knowledge of the California Vehicle Code, Manual on Uniform Traffic Control Devices, Caltrans Traffic Manual, Standard Plans and Standard Specifications. Extensive knowledge of electronics as applied to Model 332/334 Controller cabinets, various traffic data collection equipment and the design of traffic monitoring stations; inductive loop detector theory and practice; use of piezo-electric axle sensors; use of various types of electronic test equipment; minor repair of traffic monitoring equipment and other electronic equipment. Ability to communicate effectively, both verbally and in writing, and work successfully with others. Demonstrated capacity for assuming increasing responsibility. Must be able to lift and place traffic data collection equipment, work adjacent to high speed traffic for significant amounts of time, work independently and function under the Traffic Census Code of Safe Practices.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The ability to assist in decisions and take appropriate actions while working in the field is an important attribute. Employee is responsible for the correct layout of various types of traffic monitoring equipment. The consequences of gathering incorrect data could be the inaccurate calculation of the Annual Average Daily Traffic (AADT), accident rates, Traffic Indices (T.I.), Vehicle Miles of Travel (VMT) and Freeway/Highway design. Uncorrected mechanical or electrical failures, or a lack of working equipment could adversely affect program schedules and create additional costs.

PUBLIC AND INTERNAL CONTACTS

The employee will routinely contact other Caltrans personnel, Contractors, Vendors, Utility representatives and the general public to transmit or obtain relevant information. These contacts will be verbal or written, as needed to perform assignments.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

Employee is required to lift and place traffic monitoring equipment; install sensors in the roadway; use various hand and power tools, some powder-actuated tools; work on and/or near electrical circuits; and operate a large van filled with equipment. Employee will generally be working alone near high speed, high volume traffic, but also must be able to function as part of a team when required.

WORK ENVIRONMENT

This is a field position. Approximately 90% of the time the employee will be working outdoors adjacent to high speed traffic, and may be exposed to dirt, noise, uneven surfaces and/or extreme heat or cold. About 10% of the time the employee will be working in a climate controlled office under artificial lighting.

I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

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	DATE
EMPLOYEE	DATE

I have discussed the duties with and provided a copy of this duty statement to the employee named above.

	DATE
SUPERVISOR	DATE